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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/542,394	07/13/2005	Katsufusa Fujita	01488P00190US	3085

32116 7590 12/27/2006  
WOOD, PHILLIPS, KATZ, CLARK & MORTIMER  
500 W. MADISON STREET  
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CHICAGO, IL 60661

EXAMINER

NGUYEN, TRAN N

ART UNIT PAPER NUMBER

2834

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/27/2006	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/542,394	FUJITA, KATSUFUSA	
	<b>Examiner</b>	<b>Art Unit</b>	
	Tran N. Nguyen	2834	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on 15 November 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08), | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/05</u>  | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### Specification

The amendment filed 11/15/06 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material that is not supported by the original disclosure is as follows:

The amendment for the specification's page 10 "*The caulking projections 22, 24, as viewed from the side can be made, for example, a V shape, a U shape, or an inverted trapezoidal shape*" is considered to be new subject matter that is the U shape, or the inverted trapezoidal shape of the projections. As shown in the drawings, figures 2 and 6, the projections are appeared to be V-shaped. None of the drawings or the specification discloses that the projections having a U shape, or an inverted trapezoidal shape.

Applicant is required to cancel the new matter in the reply to this Office Action.

### Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

1. **Claims 7-8 and 10-11** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claims 7-8 and 10-11, the recitations of "a U shape, or an inverted trapezoidal shape" and "the caulking projections have a top that is each positioned approximately at a center" are considered as new subject matter because the original specification did not provide any

description or disclosure in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action: A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1, 3-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Bertocchi (US 5,923,112)** in view of **JP-2002-136015**.

**Bertocchi** discloses skew shape variable laminated iron core (figs 2, 4) in which plural on core pieces (2) are laminated through caulking projections (3) and caulking holes (6), in which the caulking projections are fitted, characterized in that in the iron core pieces except a lowermost layer, the caulking projections (6) and the caulking holes (3) are respectively formed at different positions of a same radius from a rotation center at skewing of the iron core pieces (figs 2, 4), and the caulking hole is longer in a circumferential direction than the caulking projection fitted in the caulking hole (fig 4), and when the caulking projection of the iron core piece of an upper layer is fitted in the caulking hole of the iron core piece, a gap is formed in the circumferential direction of each of the caulking holes (fig 4). As shown in Bertocchi's Figs 4A-4B, wherein the caulking hole (6) is formed to pass through the plural laminated iron core pieces (2, 2A), and the caulking projection fitted in the caulking hole formed to pass through reaches to a lower part position of the caulking hole formed to pass through.

Also, Bertocchi's figs 4 and 4A-4B also shows the projections are configured as a V-shaped or an inverted-trapezoidal-shaped configure with top portion being positioned approximately at a center of the configuration, and the holes can be provided in positions

substantially adjacent to the projections, so that when the laminated plates being stacked and rotated one relative to the other, i.e., skewed laminated plates, by a determined angle (FIG. 2) for reducing the overall time for stamping and stacking the laminated core plates.

***Bertocchi** substantially discloses the claimed invention, except for the limitations that the caulking hole has an arc-shape.*

**JP-2002-136015**, however, teaches a motor's magnetic core is formed by laminating and caulk a number of thin magnetic steel sheets having clamp holes and projections, wherein the holes is formed in to an arc shape (fig 1) concentric with the axial axis, and the skewed formed in the core by laminating and caulking between the projections and the arc-shape holes, as a result the magnetic noise would be eliminated.

Along with the **JP2002136015** essential teaching of forming the clamp holes as an arc-shape that concentric with the rotational axis of the core, **Bertocchi** specifically provides an important disclosure (col 3) that the holes can be advantageously dimensioned to engage the projections with a predetermined clearance or contact depending on the clamping requirements for the laminations. Also, the holes can also be positioned and configured so that to enable the projections suitably increased in height, to engage two underlying laminations by penetrating two holes in these laminations (FIGS. 4A and 4B).

Hence, those skilled in the art would understand that by applying the teaching JP2002136015 essential teaching of forming the clamp holes as an arc-shape that concentric with the rotational axis of the core with the Bertocchi's disclosure that the shape and size of the holes can be changed with respect to the corresponding projections, it would have been obvious to one skilled in the art with the necessary mechanical skills to modify the Bertocchi's laminated core plates with an arc-shaped configuration, as taught by JP2002136015. Doing so would advantageously facilitate the stacking process for the laminated core plates and enhance the abutment between laminated core plates, while reducing magnetic noise. Also, it has been held that a change in size or shape is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955) (emphasis added).

*Regarding the limitations of the caulking holes include a first caulking hole formed in every second iron core piece of the iron core pieces in a lamination direction, and a second*

*caulking hole formed at a position different from the first caulking hole and to pass through the plural laminated iron core pieces, and the caulking projections include a first caulking projection reaching to a lower part position of the first caulking hole, and a second caulking projection reaching to a lower part position of the second caulking hole.*

**Bertocchi** discloses in a various embodiment (as shown in Figs 4A-B), the caulking holes (6) may be formed to pass through the plural laminated iron core pieces (2, 2A) and the caulking projections, and the caulking projection fitted in the caulking hole formed to pass through reaches to a lower part position of the caulking hole formed to pass through for the purpose of enabling the caulking projecting suitably increased in height, to engage two underlying laminations, or penetrate two caulking holes in these laminations for firm abutment and preventing laminated core plate being disposition.

Thus, it would have been obvious to one skilled in the art at the time the invention was made to modify the core by incorporating both the first and the second types of caulking holes as well as the first and the second type of caulking projections. Doing so would ensure that the caulking projecting suitably increased in height; to engage two underlying laminations, or penetrate two caulking holes in these laminations for firm abutment and preventing laminated core plate being dispositioned.

*Regarding the method of manufacturing the skewed laminated core, as claimed,* particularly the process involving punching out the core plates by a die apparatus, Bertocchi does discloses a manufacture process including the step of stamping, i.e., punching, the laminated plates via a die apparatus (col 3-4). Those skilled in the art would understand that since Bertocchi and JP2002136015, in combined, disclose detailed structure of the skew shaped laminated core from each individual laminated core plate's caulking holes and projections to how the entire core is constructed by caulking the laminated core plates.

Thus, it would have been obvious to one skilled in the art, with necessary and ordinary mechanical skills, at the time the invention was made to develop a process of manufacturing the disclosed core because Bertocchi does both disclose a manufacture process for the core, and specifically disclose detailed structure of the skewed laminated core; additionally, JP2002136015 regarding the arc-shape of the caulking hole. Hence, the combination of the two references

disclose detailed structure of the skew shaped laminated core from each individual laminated core plate's caulking holes and projections to how the entire core is constructed by caulking the laminated core plates, and method of manufacturing a device whose structure has been disclosed in detailed would be a counter part of the device itself.

### ***Response to Arguments***

Applicant's arguments filed on 11/15/06 have been fully considered but they are not persuasive because of the following:

The applicant argues that Bertocchi teaches layers that have projections and holes, which are capable of cooperating with the layers in different rotational positions with respect to the rotation center. Bertocchi does not teach or suggest the ability to rotate layers with cooperating projections and holes, once they have been laminated.

In response to this argument, the applicant's attention is drawn to the recitation of claim 1 "wherein with the upper and lower layers laminated together and the caulking projection of the iron core piece of the upper layer fitted in the caulking hole of the iron core piece of the lower layer, the caulking projection of the iron core piece of the upper layer is movable circumferentially within the caulking hole of the iron core piece of the lower layer to thereby allow the iron core pieces of the upper and lower layers to move relative to each other around the rotation center a predetermined amount, as determined by relative circumferential dimensions of the caulking projection of the core piece in the upper layer and caulking hole of the iron core piece of the lower layer" and the recitation of claims 5, "after laminating the iron core piece(s) in the upper and lower layers, relatively moving the iron core pieces in the upper and lower layers relative to the rotation center and thereby causing the caulking projection of the iron core piece of the upper layer to move circumferentially within the caulking hole of the iron core piece of the

lower layer a predetermined amount as determined by relative circumferential dimensions of the caulking projection of the core piece in the upper layer and the caulking hole of the iron core piece of the lower layer.”

The recitation is understood as following: after stacking the laminated core pieces, one on top another, in an upper and lower layers, relatively move the caulking projections and the holes, wherein the caulking projection of the iron core piece of the upper layer is movable circumferentially within the caulking hole of the iron core piece of the lower layer to thereby allow with the upper and lower layers to move relative to each other within a determined amount of circumferential dimensions with respect to the rotation center.

The recitation does **not** specifically recite that *the upper and lower laminated layers that, once they have been laminated to form a core as a whole structure, still have the ability to rotate.*

Thus, the applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *the laminated upper and lower layers once laminated to formed a core still have the ability to rotate*) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Furthermore, just for argumentative points of view, Bertocchi discloses that each core piece is provided with the holes and the projections that are spaced at equal interval circumferentially around the rotary axis thereof, particularly the Bertocchi's core piece has the caulking holes being configured with a dimension larger than the caulking projections for



the purpose of enabling the caulking projection being movable circumferentially within the caulking hole. This means that the iron core pieces having the ability to move relative to each other during the laminating and caulking process. Because the configurations of caulking holes and the caulking projects are not changed after the core pieces being laminated and formed into a whole core structure, the ability for the caulking projections and the caulking holes to be moved relative to each other is also remain unchanged. Hence, if one prefers, one still can move the iron core pieces of the upper and lower layers to move relative to each other provided that the predetermined amount of relatively moving between the upper and lower layers is within the relative dimensions of the caulking projection of the upper layer core piece and the caulking hole of the lower layer iron core piece.

### **Conclusion**

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

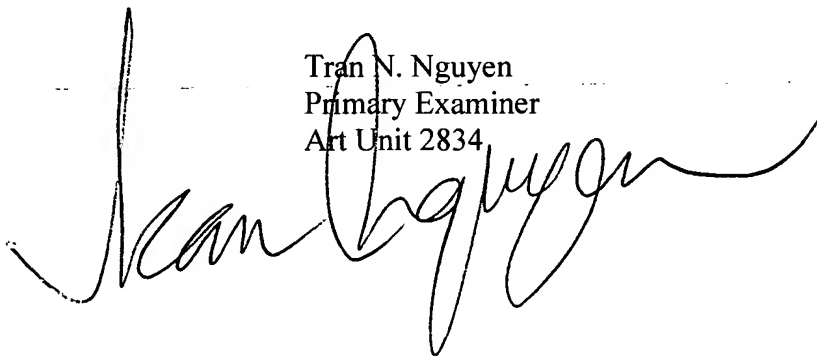
however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran N. Nguyen whose telephone number is 571-272-2030. The examiner can normally be reached on 7:00 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Darren Schuberg can be reached on 571-272-2044. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tran N. Nguyen  
Primary Examiner  
Art Unit 2834

A handwritten signature in black ink, appearing to read 'Tran N. Nguyen', is written over the printed name and title.